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A CERVALCES ANTLER FROM THE TORONTO INTERGLACIAL

BY

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A CERVALCES ANTLER FROM THE TORONTO INTERGLACIAL

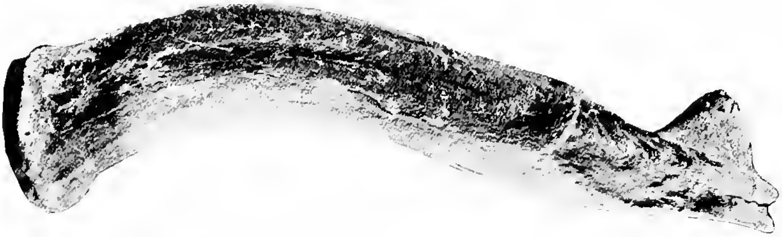
Cervalces borealis, sp. nov.

The specimen consists of a part of a right antler belonging to the Geological Collection (No. 20176) of the University of Toronto. It was obtained in 1909, by Professor A. P. Coleman, from a local gravel-pit. Like the few remaining fossils which have been obtained from Pleistocene deposits of this region, it occurred as an isolated fragment, which had doubtless been transported from another region. It appears to represent a species distinct from those already described, and is of interest in view of the infrequent discovery of *Cervalces* remains, and from the possible future correlation of Toronto deposits with those elsewhere.

As shown by the accompanying figure, the specimen comprises that portion of the antler from the burr to the beginning of palmation, including the base of the anterior ascending ramus. The beginning of palmation is indicated posteriorly only by a flattened surface where the posterior process is abruptly broken away : total length, 450 mm.; length of beam from base to beginning of anterior ascending ramus, approximately 330 mm.; diameter of middle portion of beam, 60 mm. The beam is conspicuously convex dorsally and considerably concave anteriorly, when viewed from above. The plane of the burr is not at right angles to the axis of the beam, but forms an obtuse angle with it anteriorly, showing that in its natural position the beam was directed very slightly backwards as well as outwards.

By a remarkable coincidence, the fragment is almost identical with one somewhat more complete, originally mentioned by the late Professor Calvin (1909), from Denison, Iowa, and lately described as *Cervalces roosevelti*, by Dr. O. P. Hay (1913). Mr. C. O. Thomas, of the Iowa State University has kindly sent me a photograph of the specimen, and Dr. Hay has also kindly sent me the particulars of it. The measurements of the specimen as reported by Hay give the anterior length from beam to base of ascending process, 300 mm., and the diameter of the base, 55 mm., the measurements being practically identical with those of the Toronto specimen, though it would appear from a comparison that the dorsal convexity of the Toronto specimen is considerably greater and that the posterior palmation was developed as in *C. scotti*, a feature which seems to be lacking in *C. roosevelti*.

The first adequate description of the genus is that of Scott (1885), from the almost complete specimen found in New Jersey, and named by him *Cervalces americanus* (later, *C. scotti*, Lydekker, 1898). Dr. W. J. Sinclair has kindly sent me measurements of the antler-beam of the specimen, which is now in the Princeton Museum. The anterior length, burr to base of ascending process, is 180-190 mm., the diameter of the beam, 54 mm. Though the beam portion is relatively much longer than in *Alces*, it is yet, as pointed out by Hay, relatively much shorter than in the Denison specimen, and the same remark applies to the Toronto specimen. The latter, therefore, is nearer the type of *C. roosevelti* in respect of the length of the beam, but differs in the distinct graceful outward sweep of the antler, and in the probable possession of a well-developed ramus.



Right antler of *Cervalces borealis*, from the posterior surface. X 1/4.

The problem of the age of the Toronto Pleistocene beds is rendered difficult by the scarcity of fossil material, but it is supposed to be near that of the Iowa Aftonian. The Denison deposits have been supposed to be Aftonian, but this is not certain. If the greater length of the antler-beam in *C. scotti* over that of *Alces* is an indication of a more primitive condition, then the former species is perhaps a more recent development than the types of *C. roosevelti* and *C. borealis*.

* * *

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